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# Barriers And Motivations For University Sports Participation Among Students At Universitas Negeri Surabaya

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## ABSTRACT

University students' participation in sports activities may be influenced by academic demands, facility availability, and perceived benefits. This study aimed to describe the barriers and motivations associated with participation in university sports activities at Universitas Negeri Surabaya (UNESA). A quantitative approach using a cross-sectional survey design was employed. Data were collected online via Google Forms from October 9 to 16, 2026. Participants were 50 UNESA students from the 2023–2026 cohorts recruited through convenience sampling. A researcher-developed structured questionnaire assessed respondent characteristics, participation patterns, barriers, motivations, and preferences for sports program improvements. Data were analyzed descriptively using IBM SPSS Statistics version 27.0. Time-related and academic barriers had the highest mean score among barrier categories (M = 3.25, SD = 0.88), while health and fitness had the highest mean score among motivation categories (M = 3.94, SD = 0.89). Overall, 74% of respondents had participated in university sports activities, whereas 26% had not participated during the preceding month. Additionally, 76% engaged in sports outside university-organized activities. Increasing the number of sports facilities was the most preferred improvement (M = 3.92, SD = 1.07), followed by improving facility quality (M = 3.90, SD = 1.02). These findings provide preliminary insights for university administrators to consider schedule adjustments, facility improvements, and affordable sports programs. Future research should include more diverse samples and employ instruments with established validity and reliability.

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## INTRODUCTION

Physical activity is closely associated with university students' lives, particularly because it is related to physical health, psychological well-being, and maintaining a balance among various daily activities (Abrantes et al., 2022; Donnelly et al., 2024; Taylor et al., 2022). However, university life also requires students to allocate their time among lectures, assignments, organizational activities, work, and social life (Ramón-Arbués et al., 2022). Under these circumstances, sports may be sidelined in favor of activities perceived as more urgent. Several studies have shown that university students face various barriers to maintaining an active lifestyle, including limited time, academic demands, low motivation, and inadequate access to facilities (Djiki et al., 2023; Pellerine et al., 202s2; Silva et al., 2022). For example, Rauff & Kumazawa, (2022) found that first-year university students who were more physically active reported higher levels of motivation related to health and fitness, appearance management, and stress and mood management. Thus, students' participation in sports is determined not solely by their desire to exercise but also by the circumstances and demands they encounter in the university environment (Donnelly et al., 2024; Yuan et al., 2024).

This issue becomes more complex when factors associated with physical activity are examined from both the students' perspectives and the surrounding environmental context (Donnelly et al., 2024; Mortada et al., 2024). A systematic review by Brown et al., (2024), which included 39 studies involving 17,771 university students, identified environmental context and resources, social influences, and students' goals or priorities as among the domains most frequently associated with physical activity. These findings indicate that the challenges faced by university students extend beyond time constraints. Facility availability, support from the social environment, and students' ability to establish priorities may also influence their decisions to engage in physical activity. Meanwhile, students participate in sports for various reasons (Abrantes et al., 2022; Donnelly et al., 2024). Health and fitness, mental health, appearance, opportunities for social interaction, and enjoyment have been reported as reasons for participation in several studies (Pellerine et al., 2022; Sham et al., 2022). Alkhawaldeh et al., (2024) also demonstrated an association between students' perceptions of the benefits and barriers of physical activity and their engagement in such activities. Efforts to increase physical activity among university students therefore involve not only providing opportunities for participation but also utilizing technology and social media and offering activities that better align with students' characteristics (Johannes et al., 2024; Yuan et al., 2024).

Although research on physical activity among university students has expanded considerably, some studies continue to examine physical activity as a broad, general concept (Abrantes et al., 2022; Donnelly et al., 2024; Yuan et al., 2024). Within this approach, activities undertaken independently, outside the campus, or within the university environment may be discussed collectively (Brown, Richardson, Halil-Pizzirani, et al., 2024; Silva et al., 2022). Meanwhile, students' experiences of participating in sports activities specifically provided or facilitated by universities have received less attention in terms of

the barriers and motivations associated with participation considered together (Elmahgoub et al., 2025; Radebe et al., 2025). In a mixed-methods study involving students at a semi-rural university, Radebe et al., (2025) found that enjoyment, social interaction, and health benefits were among the main reasons students engaged in physical activity. Conversely, academic workload emerged as a prominent barrier, while the qualitative findings also highlighted issues related to facilities and communication about available activities. Elmahgoub et al., (2025) reported similar patterns, particularly concerning constraints related to time, resources, and support. Akil, (2025) also demonstrated an association between perceptions of physical activity barriers and student motivation. These findings indicate that there remains an opportunity to examine university students' sports participation more specifically in the context of university-organized programs, including factors related to academic schedules, facilities, communication of activity information, social support, costs, activity variety, and the suitability of programs for students' abilities.

Understanding these issues becomes increasingly relevant when considered within the context of higher education in Indonesia (Prihanto et al., 2021). Academic environments, the organization of sports activities, and students' access to university facilities may differ from the contexts examined in studies conducted in other countries. Universities have the potential to create environments that better support student participation in sports through available facilities and the programs, information, schedules, and activities they offer (Donnelly et al., 2024; Yuan et al., 2024). Therefore, identifying the factors that encourage students to participate in university sports activities while also understanding the reasons why they do not or have yet to participate may provide a clearer picture of the current state of university sports programs. Such information can serve as a basis for considering the development of activities that better meet students' needs (Yuan et al., 2024). Based on these considerations, this study aimed to analyze the barriers and motivations associated with university students' participation in university sports activities at Universitas Negeri Surabaya (UNESA) using a cross-sectional survey approach.

## METHODS

This study employed a quantitative approach with a cross-sectional survey design to describe the barriers and motivations associated with student participation in sports activities organized or facilitated by Universitas Negeri Surabaya (UNESA), Indonesia. A cross-sectional design was used to collect data from respondents during a single observation period without administering any experimental intervention or treatment (Capili, 2022). This approach was appropriate for the study objectives, which were to describe respondent characteristics, sports participation experiences, perceived barriers, motivations for engaging in sports, and students' preferences for improvements to university sports programs.

Data were collected online via Google Forms from October 9 to 16, 2026. This study was observational in nature because it did not involve variable manipulation, interventions, or control groups. The analysis focused on descriptive statistics; therefore, the findings were used to describe response patterns within the sample rather than to examine causal relationships or statistically significant differences between variables. The reporting of this study followed the recommendations of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement for observational research, including cross-sectional studies (Elm et al., 2007).

***Participants and Sampling***

This study involved 50 students from Universitas Negeri Surabaya (UNESA), Indonesia, who provided valid responses to the online questionnaire. Participants were recruited using convenience sampling, a non-probability sampling technique based on accessibility and participants' availability (Andrade, 2021). The questionnaire link was distributed through WhatsApp groups comprising UNESA students from the 2023–2026 cohorts. Data were collected from October 9 to 16, 2026, during which 50 valid responses were obtained and included in the analysis.

Because participants were recruited through convenience sampling rather than randomly selected from the entire UNESA student population, the sample characteristics should be considered when interpreting the findings. Accordingly, the results primarily reflect the responses of students who participated in this survey and cannot be directly generalized to the entire UNESA student population (Andrade, 2021).

***Instruments and Apparatus***

The research instrument was a researcher-developed structured questionnaire designed to collect information on respondents' characteristics, participation in university sports activities, perceived barriers to participation, motivations for engaging in sports, and preferences for improving university sports programs. The questionnaire items were developed and modified by the researchers according to the study objectives and informed by previous literature on university students' motivations for sports participation and barriers to physical activity among school and university student populations (Brown, Richardson, Pizzirani, et al., 2024; Diehl et al., 2018; Silva et al., 2022).These references informed the development of the questionnaire content; however, the questionnaire was not adopted as a complete instrument from any single previously validated questionnaire. The questionnaire was administered online using Google Forms.

The questionnaire had not undergone formal validity or reliability testing before data collection. Consequently, its measurement properties had not been formally established, and the findings should be interpreted with caution. This limitation should be considered when interpreting the responses concerning participation barriers, motivations, and preferences for improving university sports programs.

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The questionnaire consisted of six sections. Section A contained eight questions concerning respondent characteristics and sports participation experiences, including sex, age, semester, faculty or study program, previous participation in university sports activities, participation frequency during the preceding month, the type of sport most frequently participated in, and sports activities outside university-organized programs.

Section B consisted of five statements (B1–B5) concerning student participation in university sports, including regularity of participation, interest, opportunities to participate, awareness of information about available activities, and intentions to participate regularly in the future.

Section C comprised 24 statements (C1–C24) addressing barriers to student participation. These statements were grouped into five domains: time-related and academic barriers (C1–C5), motivational and psychological barriers (C6–C10), facilities and environmental barriers (C11–C15), social and informational barriers (C16–C20), and financial and program suitability barriers (C21–C24). Each statement was rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Section D consisted of 20 statements (D1–D20) addressing students' motivations for participating in university sports activities. This section covered five domains: health and fitness (D1–D4), psychological well-being and life balance (D5–D8), social interaction (D9–D12), fun and enjoyment (D13–D16), and personal development and achievement (D17–D20). Responses were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Section E comprised 10 statements (E1–E10) concerning students' preferences for improvements to university sports programs. The aspects assessed included variety in sports activities, facility availability and quality, schedule adjustments, ease of access to information, suitability of activities for students' abilities, affordability, opportunities for group-based sports participation, and scheduling flexibility during examination periods. This section used a five-point scale ranging from 1 (not at all important) to 5 (extremely important).

Section F contained one open-ended question asking students to suggest ways to increase participation in university sports activities. Responses to this question were not analyzed in this study and were excluded from the analytical results.

The tools used in this study included Google Forms for questionnaire distribution and response collection, Microsoft Excel for data management and preparation, and IBM SPSS Statistics version 27.0 for descriptive statistical analysis. The questionnaire was developed by the researchers with reference to relevant literature; however, this study did not report conducting validity or reliability testing of the instrument.

***Procedures / Data Collection***

Data were collected online via Google Forms from October 9 to 16, 2026. Initially, the researchers developed the questionnaire based on the study objectives and the specific aspects to be measured. The questionnaire link was subsequently distributed through WhatsApp groups of UNESA students from the 2023–2026 cohorts using convenience sampling.

Students targeted for recruitment were asked to complete the questionnaire independently based on their individual characteristics, experiences, and perceptions. The information provided in the questionnaire form stated that all responses would remain anonymous and would be used solely for research purposes. Accordingly, respondents' answers were collected through the online form without administering any intervention or experimental treatment.

Data collection took place during the predetermined period, from October 9 to 16, 2026, with a target of 50 respondents. After the data collection period ended, the collected responses were reviewed to determine their suitability for inclusion in the analysis. This review yielded 50 valid responses, which were subsequently included in the study dataset.

The collected data were then managed using Microsoft Excel and prepared for analysis using IBM SPSS Statistics version 27.0. The data were organized according to respondent characteristics and the statement categories in the questionnaire. Responses to closed-ended questions were coded according to the response categories and measurement scales used. Responses to the open-ended question were not analyzed and were not used as a basis for drawing study conclusions.

***Data Analysis***

The data were analyzed using descriptive statistics with IBM SPSS Statistics version 27.0. This analysis was used to describe respondent characteristics and the distribution of responses concerning participation in university sports activities, participation barriers, motivations for engaging in sports, and preferences for improvements to sports programs at UNESA. The use of descriptive statistics was consistent with the study objectives, which focused on presenting sample characteristics and response patterns without conducting inferential hypothesis testing (Elm et al., 2007)

Categorical data, including sex, faculty, semester, and sports participation characteristics, were summarized using frequencies and percentages. Respondents' ages were summarized using the mean and standard deviation. Responses to statements concerning participation, barriers, motivations, and preferences for sports program improvements were summarized descriptively according to the response categories on the scales used in the questionnaire. The results were presented in tables and numerical summaries.

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This study did not employ inferential statistical tests, such as the t-test, analysis of variance (ANOVA), Pearson correlation, or regression analysis. Consequently, hypothesis testing and the application of statistical significance thresholds, such as $p < 0.05$, were not undertaken. The interpretation of the findings was limited to the distributions and descriptive summaries of the 50 valid responses. The methods and results were reported in accordance with the STROBE guidelines for observational studies (Elm et al., 2007).

## RESULTS

### *Respondent Characteristics and Sports Participation Patterns*

A total of 50 students participated in the study. Respondents were aged 17–28 years, with a mean age of 20.40 years (SD = 1.59). Most respondents were male (66.0%), were in semesters 5–6 (70.0%), and were enrolled in the Faculty of Sports and Health Sciences (78.0%). All respondents were undergraduate students.

Regarding previous participation in university-organized or university-facilitated sports activities, 37 respondents (74.0%) reported having participated. In contrast, 26.0% reported no participation in university sports activities during the month preceding the survey. The most frequently reported participation frequency was 2–3 times during that month (34.0%). In addition, 76.0% of respondents reported participating in sports activities outside university-organized programs. Respondent characteristics and sports participation patterns are presented in Table 1.

**Table 1.** Respondent characteristics and sports participation patterns (N = 50)

| Characteristic | Category | N | Percentage |
|---|---|---|---|
| Sex | Male | 33 | 66 |
| | Female | 17 | 34 |
| Age | Mean ± SD | — | 20.40 ± 1.59 |
| | Minimum–maximum | — | 17–28 |
| Semester | Semesters 1–2 | 9 | 18 |
| | Semesters 3–4 | 2 | 4 |
| | Semesters 5–6 | 35 | 70 |
| | Semester 7 or above | 4 | 8 |
| Faculty | Sports and Health Sciences | 39 | 78 |
| | Languages and Arts | 5 | 10 |
| | Medicine | 2 | 4 |
| | Economics and Business | 2 | 4 |
| | Social Sciences and Law | 1 | 2 |
| | Education | 1 | 2 |
| Previous participation in university sports | Yes | 37 | 74 |
| | No | 13 | 26 |
| University sports participation frequency during the preceding month | Never | 13 | 26 |
| | Once | 11 | 22 |
| | 2–3 times | 17 | 34 |

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| | | | |
|---|---|---|---|
| | 4–7 times | 5 | 10 |
| | ≥8 times | 4 | 8 |
| Active in sports outside university activities | Yes | 38 | 76 |
| | No | 12 | 24 |

The most frequently reported sports were swimming (16.0%), followed by soccer/futsal (14.0%), martial arts (14.0%), and other recreational sports (14.0%). Volleyball was reported by 10.0% of respondents, while each of the remaining categories had a lower frequency. In the raw dataset, the categories "bola tangan" and "handball" were recorded separately; they were not combined in this report to preserve the categories as recorded in the data.

**Table 2.** Types of sports most frequently participated in, based on respondent data

| Type of sport | N | Persentase |
|---|---|---|
| Swimming | 8 | 16 |
| Soccer/futsal | 7 | 14 |
| Martial arts | 7 | 14 |
| Other recreational sports | 7 | 14 |
| Volleyball | 5 | 10 |
| Fitness/gym | 3 | 6 |
| Judo | 2 | 4 |
| Athletics | 2 | 4 |
| Bola tangan | 2 | 4 |
| Fencing | 1 | 2 |
| Tennis | 1 | 2 |
| Gymnastics/aerobics | 1 | 2 |
| Sepak takraw | 1 | 2 |
| Handball | 1 | 2 |
| Badminton | 1 | 2 |
| Never participated | 1 | 2 |
| **Total** | **50** | **100** |

***Participation in University Sports Activities***

The mean score across the five participation items was 3.63 (SD = 0.81) on a 1–5 response scale. Based on the mean scores for individual items, interest in participating in university sports activities (B2) had the highest mean score (M = 3.80; SD = 0.95), followed by perceived adequacy of opportunities to participate (B3; M = 3.78; SD = 0.89). Meanwhile, the item concerning current regular participation (B1) had the lowest mean score (M = 3.40; SD = 1.05). Descriptive statistics for each item are presented in Table 3.

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**Table 3.** Descriptive statistics for participation in university sports activities

| Code | Statement | N | Mean | SD | Min. | Max. |
|---|---|---|---|---|---|---|
| B1 | I regularly participate in sports activities provided by the university. | 50 | 3.40 | 1.05 | 1 | 5 |
| B2 | I am interested in participating in sports activities organized by the university. | 50 | 3.80 | 0.95 | 1 | 5 |
| B3 | I have sufficient opportunities to participate in university sports activities. | 50 | 3.78 | 0.89 | 1 | 5 |
| B4 | I am aware of information about sports activities available at the university. | 50 | 3.54 | 0.93 | 2 | 5 |
| B5 | I intend to participate regularly in university sports activities over the next few months. | 50 | 3.62 | 0.95 | 1 | 5 |
| | **Overall mean** | **50** | **3.63** | **0.81** | **1** | **5** |

***Barriers to Participation in University Sports Activities***

Among the five barrier categories established in the questionnaire, time-related and academic barriers had the highest mean score (M = 3.25; SD = 0.88). Facilities and environmental barriers had a mean score of 2.92 (SD = 0.95), while motivational and psychological barriers had a mean score of 2.87 (SD = 0.86). Financial and program suitability barriers had a mean score of 2.86 (SD = 0.83). Social and informational barriers had the lowest mean score (M = 2.82; SD = 0.82).

At the item level, the statement indicating that academic workload made it difficult to participate in university sports activities (C1) had the highest mean score (M = 3.32; SD = 1.00). In contrast, the statement concerning insufficient peer support (C17) had the lowest mean score (M = 2.72; SD = 0.95). Descriptive statistics for all barrier items are presented in Table 4. These mean scores indicate response patterns within the sample and are not intended to demonstrate statistically significant differences between barrier categories.

**Table 4.** Descriptive statistics for participation barrier items

| Code | Domain | Statement | N | Mean | SD |
|---|---|---|---|---|---|
| C1 | Time and Academic | My academic workload makes it difficult for me to participate in university sports activities. | 50 | 3.32 | 1 |
| C2 | Time and Academic | Academic assignments reduce the time I can devote to sports. | 50 | 3.24 | 1 |
| C3 | Time and Academic | The schedules of university sports activities often conflict with my class schedule. | 50 | 3.26 | 0.88 |
| C4 | Time and Academic | Examination schedules or academic assignments cause me to reduce my participation in sports activities. | 50 | 3.26 | 1.03 |
| C5 | Time and Academic | I have difficulty managing my time between academic responsibilities and sports activities. | 50 | 3.16 | 1.02 |

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| | | | | | |
|---|---|---|---|---|---|
| C6 | Motivational and Psychological | I often feel insufficiently motivated to participate in university sports activities. | 50 | 2.9 | 0.93 |
| C7 | Motivational and Psychological | I prefer to spend my free time on other activities rather than sports. | 50 | 2.86 | 0.95 |
| C8 | Motivational and Psychological | I feel too tired to participate in sports activities after completing my academic activities. | 50 | 2.9 | 0.99 |
| C9 | Motivational and Psychological | I lack confidence when participating in certain sports activities. | 50 | 2.84 | 1 |
| C10 | Motivational and Psychological | I feel that my sports skills are not yet sufficient to participate in some university sports activities. | 50 | 2.86 | 1.09 |
| C11 | Facilities and Environment | The sports facilities available at the university are inadequate for students' needs. | 50 | 2.92 | 1.08 |
| C12 | Facilities and Environment | Access to university sports facilities is not convenient for me. | 50 | 2.9 | 1.13 |
| C13 | Facilities and Environment | The availability of sports fields or facilities limits my opportunities to participate. | 50 | 2.86 | 0.93 |
| C14 | Facilities and Environment | The hours during which sports facilities are available do not fit well with my schedule. | 50 | 2.9 | 0.99 |
| C15 | Facilities and Environment | The condition of sports facilities affects my willingness to participate. | 50 | 3.04 | 1.01 |
| C16 | Social and Informational | I do not have friends whom I can invite to participate in university sports activities. | 50 | 2.8 | 1.07 |
| C17 | Social and Informational | A lack of support from friends makes me less interested in participating in campus sports. | 50 | 2.72 | 0.95 |
| C18 | Social and Informational | I receive insufficient information about available sports activities. | 50 | 2.9 | 0.91 |
| C19 | Social and Informational | I have difficulty obtaining information about sports activity schedules. | 50 | 2.82 | 0.87 |
| C20 | Social and Informational | I feel that I receive insufficient encouragement from my social environment to participate in university sports. | 50 | 2.84 | 0.98 |
| C21 | Financial and Program Suitability | The costs associated with participating in some sports activities are a barrier for me. | 50 | 2.92 | 1.05 |
| C22 | Financial and Program Suitability | The types of sports activities available do not adequately match my interests. | 50 | 2.88 | 1 |

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|---|---|---|---|---|---|
| C23 | Financial and Program Suitability | The skill level required for some sports activities discourages me from participating. | 50 | 2.82 | 0.98 |
| C24 | Financial and Program Suitability | The number or variety of available sports programs is still limited. | 50 | 2.82 | 0.92 |

***Motivations for Participating in University Sports Activities***

Among the five motivation categories, health and fitness had the highest mean score (M = 3.94; SD = 0.89). Fun and enjoyment, as well as personal development and achievement, had equal mean scores after rounding (both M = 3.71), while social interaction had a mean score of 3.69 (SD = 0.81). Psychological well-being and life balance had the lowest mean score (M = 3.62; SD = 0.77).

At the item level, the statement concerning improvements in physical strength and endurance (D3) had the highest mean score (M = 3.96; SD = 0.88). In contrast, the statement concerning exercising to reduce stress associated with academic activities (D5) had the lowest mean score (M = 3.54; SD = 0.95). Descriptive statistics for all motivation items are presented in Table 5.

**Table 5.** Descriptive statistics for motivation items related to participation in university sports activities

| Code | Domain | Statement | N | Mean | SD |
|---|---|---|---|---|---|
| D1 | Health and Fitness | I participate in sports to maintain my physical health. | 50 | 3.92 | 0.97 |
| D2 | Health and Fitness | I participate in sports to improve my physical fitness. | 50 | 3.94 | 0.91 |
| D3 | Health and Fitness | I participate in sports to improve my physical strength and endurance. | 50 | 3.96 | 0.88 |
| D4 | Health and Fitness | I participate in sports to maintain my body in good physical condition. | 50 | 3.92 | 0.97 |
| D5 | Psychological Well-Being and Life Balance | I exercise to reduce stress associated with academic activities. | 50 | 3.54 | 0.95 |
| D6 | Psychological Well-Being and Life Balance | I exercise because it helps me feel more relaxed. | 50 | 3.68 | 0.94 |
| D7 | Psychological Well-Being and Life Balance | Sports help me manage my academic activities in a more balanced way. | 50 | 3.6 | 0.95 |
| D8 | Psychological Well-Being and Life Balance | I feel psychologically better after engaging in sports. | 50 | 3.64 | 0.75 |
| D9 | Social Interaction | I participate in sports to interact with other students. | 50 | 3.58 | 0.88 |

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| | | | | | |
|---|---|---|---|---|---|
| D10 | Social Interaction | I enjoy exercising with my friends. | 50 | 3.8 | 0.86 |
| D11 | Social Interaction | Sports activities help me build social relationships within the university environment. | 50 | 3.72 | 0.86 |
| D12 | Social Interaction | I am interested in participating in sports because they allow me to be part of a group or community. | 50 | 3.66 | 0.96 |
| D13 | Fun and Enjoyment | I participate in sports because the activities are enjoyable. | 50 | 3.72 | 0.88 |
| D14 | Fun and Enjoyment | I enjoy the time I spend engaging in sports. | 50 | 3.74 | 0.92 |
| D15 | Fun and Enjoyment | I feel happy when participating in university sports activities. | 50 | 3.7 | 0.95 |
| D16 | Fun and Enjoyment | I choose sports activities that provide an enjoyable experience. | 50 | 3.68 | 0.84 |
| D17 | Personal Development and Achievement | I participate in sports to improve my sports skills. | 50 | 3.74 | 0.99 |
| D18 | Personal Development and Achievement | I participate in sports to achieve personal goals. | 50 | 3.64 | 1.05 |
| D19 | Personal Development and Achievement | I participate in sports to challenge my own abilities. | 50 | 3.68 | 1.06 |
| D20 | Personal Development and Achievement | I want to develop new abilities through sports activities. | 50 | 3.78 | 1 |

***Preferences for Improving University Sports Programs***

In the section on improvement preferences, the overall mean response across the ten items was 3.81 (SD = 0.92) on a five-point importance scale (1–5). Increasing the number of sports facilities (E2) received the highest mean score (M = 3.92; SD = 1.07), followed by improving the quality of sports facilities (E3; M = 3.90; SD = 1.02). Increasing the number of sports activity sessions (E4) received the lowest mean score (M = 3.62; SD = 0.97). The mean scores for each improvement preference item are presented in Table 6.

**Table 6.** Descriptive Statistics for Preferences for Improving University Sports Programs

| Code | Statement | N | Mean | SD | Min. | Max. |
|---|---|---|---|---|---|---|
| E1 | Increasing the variety of sports offered. | 50 | 3.66 | 0.85 | 2 | 5 |
| E2 | Increasing the number of sports facilities. | 50 | 3.92 | 1.07 | 1 | 5 |
| E3 | Improving the quality of sports facilities. | 50 | 3.9 | 1.02 | 2 | 5 |
| E4 | Increasing the number of scheduled sports activities. | 50 | 3.62 | 0.97 | 2 | 5 |
| E5 | Adjusting sports activity schedules to align with class schedules. | 50 | 3.86 | 0.97 | 2 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| E6 | Making information about sports activities more accessible. | 50 | 3.84 | 1.06 | 1 | 5 |
| E7 | Providing sports activities that are better suited to students' skill levels. | 50 | 3.8 | 0.97 | 2 | 5 |
| E8 | Providing more affordable or free sports programs. | 50 | 3.88 | 1.06 | 2 | 5 |
| E9 | Providing sports activities that allow students to participate in groups. | 50 | 3.78 | 1 | 1 | 5 |
| E10 | Providing flexible sports schedules during examination periods. | 50 | 3.8 | 1.11 | 1 | 5 |
| | **Overall Mean** | 50 | 3.81 | 0.92 | 1.9 | 5 |

## DISCUSSION

### *Barriers to Participation in University Sports Activities*

The main finding of this study was that time-related and academic barriers had the highest mean score among the barrier categories (M = 3.25; SD = 0.88). At the item level, academic workload was the most prominent barrier (M = 3.32; SD = 1.00). These results indicate that, within the study sample, academic demands were the most salient aspect of students' perceptions of the difficulties associated with participating in university sports activities. This finding highlights the importance of considering students' academic schedules and time-management demands when planning university sports activities. However, the descriptive findings do not establish whether these factors determine students' actual participation.

These results are consistent with the systematic review by Brown et al., (2024), which identified priorities, environmental contexts, and resources as important factors associated with physical activity among university students. Radebe et al., (2025) also found that academic workload was one of the main barriers to students' participation in physical activity. This similarity in patterns reinforces the relevance of time management as an issue in the context of university sports. Nevertheless, the findings of the present study do not demonstrate that academic demands directly cause low participation. The data describe only respondents' perceptions of the barriers they experienced or perceived.

The facilities and environment category ranked second, with a mean score of 2.92 (SD = 0.95). At the item level, the condition of sports facilities affecting willingness to participate had a mean score of 3.04 (SD = 1.01). These findings should be considered alongside respondents' preferences for increasing the number of sports facilities and improving their quality, which received mean scores of 3.92 and 3.90, respectively, in the program improvement section. This pattern suggests that facilities are an aspect that warrants attention in the development of university sports programs, although facility-related barriers did not receive the highest mean score in this study.

These results are consistent with Brown et al., (2024), who discussed the importance of environmental context and resources for physical activity among university students. Radebe et al., (2025) also reported that limited facilities and communication about available programs can constrain participation. In the context of Universitas Negeri Surabaya (UNESA), these findings may provide a basis for evaluating the adequacy of facilities, the condition of sports infrastructure, and students' ease of access to available facilities. However, because this study did not conduct a facility audit or objectively measure access, the findings cannot be used to conclude that UNESA's sports facilities are inadequate overall.

The social and informational barriers category had the lowest mean score (M = 2.82; SD = 0.82), while the statement concerning insufficient support from friends had the lowest mean score at the item level (M = 2.72; SD = 0.95). Descriptively, this pattern indicates that the social barriers assessed in the questionnaire were relatively less prominent than time-related and academic barriers. Nevertheless, this does not mean that social support and information dissemination are unimportant. Brown et al., (2024) identified social influence as one of the domains associated with physical activity among university students, while Diehl et al., (2018) showed that students' reasons for engaging in sports include interpersonal relationships. Differences between the findings of the present study and previous research may be related to institutional context, respondent characteristics, or the scope of the questions used. These factors were not directly examined in this study; therefore, such explanations should be treated as possibilities rather than conclusions.

***Motivation for Participating in University Sports Activities***

Regarding motivation, health and fitness had the highest mean score among the five motivation categories (M = 3.94; SD = 0.89). The statement concerning improving physical strength and endurance also had the highest mean score at the item level (M = 3.96; SD = 0.88). These findings indicate that physical benefits were the most prominent reason in students' responses regarding motivation to participate in university sports activities. In other words, within this sample, sports were primarily viewed as a means of maintaining physical condition and improving fitness.

These findings are consistent with Diehl et al., (2018), who identified fitness as one of the motivational factors influencing university students' engagement in sports. Radebe et al., (2025) also reported health benefits as one of the motivations for participating in physical activity, alongside enjoyment and social interaction. This consistency suggests that physical benefits may be an important message to emphasize when communicating information about university sports programs. As a practical implication, information about these activities could highlight the benefits of sports for fitness and the maintenance of physical condition, without overlooking other goals that students may have.

In addition to health and fitness, the enjoyment and personal development and achievement categories each had a mean score of 3.71, while social interaction had a mean score of 3.69. The similarity of these scores indicates that students' motivations in this sample were not limited to physical benefits but also included enjoyable experiences, opportunities to develop skills, and interaction with other students. This pattern is consistent with Diehl et al., (2018), who identified enjoyment and social contact as components of students' motivation to engage in sports, and Radebe et al., (2025), who found that enjoyment and social interaction were important motivations for physical activity.

Meanwhile, psychological well-being and life balance had the lowest mean score among the motivation categories (M = 3.62; SD = 0.77). At the item level, exercising to reduce stress associated with academic activities had a mean score of 3.54 (SD = 0.95). This result does not mean that students do not experience psychological benefits from sports. Rather, it indicates that, based on responses to the questionnaire statements, stress reduction was a less prominent motivation than health and fitness. This study also did not measure changes in stress or psychological well-being before and after participation in sports. Therefore, the findings cannot be used to evaluate the effectiveness of sports in reducing stress among university students.

***Actual Participation and Preferences for Program Improvement***

A total of 74% of respondents reported having previously participated in sports activities organized or facilitated by the university. However, participation frequency during the previous month showed that 26% of respondents had not participated in university sports activities during that period, while the most frequently reported category was participation two to three times. In addition, 76% of respondents reported being physically active outside university-organized activities. This difference illustrates that sports participation outside the university and participation in university sports programs should be understood as two distinct aspects. Students may remain physically active without participating in programs provided or facilitated by the university.

This pattern is important for evaluating campus sports programs because having participated in the past does not necessarily indicate regular involvement. Diehl et al., (2018) also examined the use of university sports programs as an aspect distinct from students' reasons for engaging in physical activity. Accordingly, program development should not focus solely on increasing general interest in sports but should also consider how easily students can access and participate in available activities. However, this study did not investigate the specific reasons why some respondents who had participated previously did not take part during the preceding month. The causes of this irregular participation therefore require further investigation.

Regarding program improvement preferences, increasing the number of sports facilities had the highest mean score (M = 3.92; SD = 1.07), followed by improving facility quality (M = 3.90; SD = 1.02). More affordable or free sports programs also received a relatively high mean score (M = 3.88; SD = 1.06), as did aligning sports schedules with class schedules (M = 3.86; SD = 0.97). This pattern indicates that respondents considered facilities, affordability, and scheduling compatibility to be among the aspects worth considering when improving university sports programs.

These preferences can be considered alongside the high mean score for time-related and academic barriers. Descriptively, the two findings suggest that program improvements could take into account scheduling that better accommodates academic activities, more flexible time options, and an evaluation of facility availability. Diehl et al., (2018) also reported that adjusting sports program schedules to accommodate class timetables is one potential improvement for making programs more suitable for students' needs. Meanwhile, the findings of Radebe et al., (2025) highlight the relevance of facilities and program communication to student participation. Based on the present findings, the university could consider reviewing schedules and facilities as an initial step, followed by establishing implementation priorities through a broader needs assessment.

Nevertheless, preference scores cannot be interpreted directly as evidence that increasing the number of facilities is the most effective intervention for improving participation. The questionnaire measured the importance respondents assigned to proposed improvements rather than the actual effects of implementing these measures. In addition, differences in mean scores across the proposed improvements were not tested using inferential statistics. Therefore, the ranking of mean scores in this study describes response patterns rather than demonstrating statistically significant differences.

### *Implications and Limitations of the Study*

Overall, the findings provide an overview indicating that time-related and academic barriers were the most prominent barrier category, while health and fitness had the highest mean score among the motivation categories. At the same time, respondents expressed interest in increasing the number of facilities, improving facility quality, making programs more affordable, and adjusting schedules. These findings may provide preliminary input for university sports program managers when evaluating scheduling compatibility, facility availability, participation costs, and program variety in relation to students' needs. Program development could also consider the benefits of fitness, enjoyment, social interaction, and opportunities to develop skills to accommodate students' diverse needs. The contribution of this study lies in providing a context-specific descriptive overview of students' perceived barriers, motivations for sports participation, and preferences for improving university sports programs at UNESA. By examining these aspects together, the findings provide preliminary information that may inform future needs assessments and program planning. However, the findings represent the responses of the participating students and should not be interpreted as representative of the entire UNESA student population.

The findings should be interpreted in light of several limitations. First, the sample consisted of 50 respondents recruited through convenience sampling via UNESA student WhatsApp groups, covering cohorts from 2023 to 2026. Therefore, the respondents may not represent the entire UNESA student population, and the findings cannot be directly generalized to that population. Second, most respondents were from the Faculty of Sports and Health Sciences, meaning that the uneven distribution across faculties may limit the representation of experiences among students from other academic disciplines.

Third, the questionnaire was developed and modified by the researchers based on the study objectives and relevant literature but had not undergone formal validity or reliability testing before data collection. Consequently, the measurement properties of the instrument had not been formally established. The mean scores for the barrier and motivation categories should therefore be interpreted as descriptive summaries of questionnaire items grouped according to the study design, rather than as scores from formally validated measurement scales. Accordingly, the mean scores for the barrier and motivation categories should be understood as descriptive summaries of items grouped according to the questionnaire design rather than as measures of validated constructs. Fourth, the analysis was limited to descriptive statistics. The study did not examine relationships between respondent characteristics, barriers, motivations, and participation frequency; therefore, it cannot establish which factors were statistically associated with involvement in university sports activities. Fifth, the cross-sectional design captured responses during a single data collection period and cannot explain changes in behavior over time. Responses to the open-ended question were also not analyzed and therefore did not provide additional qualitative data to explain the responses to the closed-ended items.

Future research should involve larger and more diverse samples across faculties and use sampling strategies that improve respondent representativeness. Instrument development should include validity and reliability testing before the instrument is used to construct or compare category scores. In addition, future studies could combine surveys with interviews or analyses of open-ended responses to gain a deeper understanding of students' experiences concerning schedules, facilities, costs, information, and social support. Repeated measurements or longitudinal designs could also be considered to examine changes in participation over time. These developments could provide a stronger evidence base for planning and evaluating university sports programs.

## CONCLUSION

This study indicates that time-related and academic demands were the most prominent barriers to student participation in university sports activities at Universitas Negeri Surabaya (UNESA). Meanwhile, health and fitness were the primary motivations for participating in sports activities. Although most respondents had previously participated in university sports activities and remained physically active outside these programs, regular participation in university-organized sports programs still warrants attention. Respondents also expressed preferences for increasing the number of sports facilities, improving facility quality,providing more affordable programs, and offering schedules that accommodate academic activities.

Based on these findings, university sports program managers are encouraged to consider adjusting activity schedules, improving the availability and quality of sports facilities, and providing affordable programs that meet students' needs. Future research should involve larger and more diverse samples and use instruments that have undergone validity and reliability testing to strengthen the understanding of barriers to and motivations for student participation in university sports activities.

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## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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